

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016498**Date Inspected:** 19-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr.Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

**BAY 10**

This QA Inspector performed randomly Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as Tower lift 4 pad eye. The weld designations reviewed are as follows.

SSD1-FASA4-1A/E-35, 36

SSD1-FBSA4-1A/C-98, 99

SSD1-FASA4-1A/E-53

CAMPSA-4-4

NDT Notification No-06430

**BAY 10**

This QA Inspector performed randomly Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as Lift 4 South tower skin D mechanical piping.

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The weld designations reviewed are as follows.

ETM-1C/C-18-4, ETM-1C/C-13-6, ETM-1C/C-11-6  
NDT Notification No-06434

This QA Inspector observed the following work in progress:

BAY 10, SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 044515, 500363, 052930, 052493, 040582, 050289 Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 Grillage plate. Joint identified as SSD1-TL5-1B-F-7A, 7B, 1A. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 067520, 066422, 066261, 066236, Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 5 Grillage plate. Joint identified as NSD1-TL5-3B-F-2, 3, 35, 36. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U4c.

This QA Inspector observed ZPMC qualified welding personnel identified as 066002, 066179, Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 5 Grillage plate. Joint identified as NSD1-TL5-3B-F-15. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U4c.

Heat Straightening:

This QA Inspector observed ZPMC personal performing heat straightening on OBG bike path stringer plate. Plate identified as BK004A6-028-074, 075 and BK004A7-028-75, 76, 146, 147, 15, 16. Joint identified ZPMC QC identified as Yang Ming Ming with heat straightening report HSR1 (B)-9016. The maximum deformation observed 15mm.

BAY 11: SMAW Process.

This QA Inspector observed ZPMC qualified welding personnel identified as 040610, 040655, Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2B-F-8A, 8B. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 040723, Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2B-F-10. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U4c.

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, 040724, Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate. Joint identified as ESD1-TL5-2E-F-26A. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

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This QA Inspector observed ZPMC qualified welding personnel identified as 067611, 066674, Perform Shielded Metal Arc Welding (SMAW) on West Tower lift 5 Grillage plate, Joint identified as WSD1-TL5-4E-F-30. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3313-Tc-P5.

This QA Inspector observed ZPMC qualified welding personnel identified as 067993, Perform Shielded Metal Arc Welding (SMAW) on West Tower lift 5 Grillage plate, Joint identified as WSD1-TL5-4B-F-19. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U4c.

This QA Inspector observed ZPMC qualified welding personnel identified as 066163, Perform Shielded Metal Arc Welding (SMAW) on West Tower lift 5 Grillage plate, Joint identified as WSD1-TL5-4B-F-18A. ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 202100, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate, Joint identified as WSD1-SPSA5-17-3A. ZPMC QC Identified as Liu Dao Feng. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1. For more information see below attached picture number 1.

## Ultrasonic Testing:

This QA Inspector observed ZPMC Ultrasonic Testing Inspector, performing UT on OBG Bike path plate after repair at 31 Location. Joint identified as BK004A1-024-009. For more information see below attached picture number 2.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng Phone: 15921845703, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Gaikwad,Shailesh
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Clifford,William
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QA Reviewer
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